



MERCANT, GOULD, SMITH, EDELL, WILSON & CO.  
United States Patent Application  
COMBINED DECLARATION AND POWER OF ATTORNEY

I, Edell, Wilton A. named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: ENDOCARDIAL MAPPING SYSTEM

The specification of which

a.    is attached hereto

b. X was filed on September 23, 1992 as application serial no. 07/950,448 and was amended on    (if applicable) (in the case of a PCT-filed application) described and claimed in international no.    filed    and as amended on    (if any), which I have reviewed and for which I solicit a United States patent.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a) (see page 3 attached hereto).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent of inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

a. X no such applications have been filed.

b.    such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119

| COUNTRY | APPLICATION NUMBER | DATE OF FILING<br>(day, month, year) | DATE OF ISSUE<br>(day, month, year) |
|---------|--------------------|--------------------------------------|-------------------------------------|
|         |                    |                                      |                                     |
|         |                    |                                      |                                     |

ALL FOREIGN APPLICATIONS, IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)

| COUNTRY | APPLICATION NUMBER | DATE OF FILING<br>(day, month, year) | DATE OF ISSUE<br>(day, month, year) |
|---------|--------------------|--------------------------------------|-------------------------------------|
|         |                    |                                      |                                     |
|         |                    |                                      |                                     |

I hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

| U.S. APPLICATION NUMBER | DATE OF FILING (day, month, year) | STATUS (patented, pending, abandoned) |
|-------------------------|-----------------------------------|---------------------------------------|
|                         |                                   |                                       |
|                         |                                   |                                       |

RECEIVED

JUN 04 1993

APPLICATION DIVISION

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

|                     |                   |                      |                   |                         |                 |
|---------------------|-------------------|----------------------|-------------------|-------------------------|-----------------|
| Batzli, Brian H.    | Reg. No. 32,960   | Johnson, David G.    | Reg. No. 31,628   | Schwappach, Karl G.     | Reg. No. 31,628 |
| Beck, Robert C.     | Reg. No. 28,184   | Kiuth, Daniel J.     | Reg. No. 32,146   | Schwegman, Michael L.   | Reg. No. 31,628 |
| Bogucki, Raymond A. | Reg. No. 17,426   | Kowalchuk, Alan W.   | Reg. No. 31,535   | Sebald, Gregory A.      | Reg. No. 31,628 |
| Brennan, Thomas F.  | Reg. No. 35,073   | Lasky, Michael B.    | Reg. No. 29,555   | Smith, Phillip H.       | Reg. No. 31,628 |
| Brusse, Steven C.   | Reg. No. 34,130   | Lundberg, Steven W.  | Reg. No. 30,568   | Smith, Stephanie J.     | Reg. No. 31,628 |
| Byrne, Linda M.     | Reg. No. 32,404   | Lynch, David W.      | Reg. No. P-36,204 | Sorensen, Andrew D.     | Reg. No. 31,628 |
| Carlson, Alan G.    | Reg. No. 33,959   | Mau, Michael L.      | Reg. No. 30,087   | Sorenstrom, Dennis G.   | Reg. No. 31,628 |
| Caspers, Philip P.  | Reg. No. 33,227   | Maxin, John L.       | Reg. No. 34,668   | Strawbridge, Douglas A. | Reg. No. 31,628 |
| Clifford, John A.   | Reg. No. 30,247   | McDonald, Daniel W.  | Reg. No. 32,044   | Strodthoff, Kristine M. | Reg. No. 31,628 |
| Conrad, Timothy R.  | Reg. No. 30,164   | McDonald, Wendy M.   | Reg. No. 32,427   | Sumner, John P.         | Reg. No. 31,628 |
| DiPietro, Mark J.   | Reg. No. 28,707   | Michel, Michelle M.  | Reg. No. 33,968   | Sumners, John S.        | Reg. No. 31,628 |
| Edell, Robert T.    | Reg. No. 20,187   | Moy, R. Carl         | Reg. No. 30,725   | Taylor, Gregory M.      | Reg. No. 31,628 |
| Freed, Robert C.    | Reg. No. 32,569   | Mueting, Ann M.      | Reg. No. 33,977   | Tellekson, David K.     | Reg. No. 31,628 |
| Gates, George H.    | Reg. No. 33,500   | Mundelius, Antony C. | Reg. No. P-33,963 | Underhill, Albert L.    | Reg. No. 31,628 |
| Golla, Charles E.   | Reg. No. 26,896   | Neison, Albin J.     | Reg. No. 28,650   | Vandenburgh, J. Derek   | Reg. No. 31,628 |
| Gould, John D.      | Reg. No. 18,223   | Rasach, Kevin W.     | Reg. No. 35,651   | Walter, Paul A.         | Reg. No. 31,628 |
| Grossen, John J.    | Reg. No. 37,112   | Reiland, Earl D.     | Reg. No. 25,767   | Williams, Douglas J.    | Reg. No. 31,628 |
| Hamre, Curtis B.    | Reg. No. 29,165   | Rothfus, Joel A.     | Reg. No. 33,277   | Woesener, Warren D.     | Reg. No. 31,628 |
| Harris, Karl S.     | Reg. No. 35,181   | Schmidt, Cecil C.    | Reg. No. 20,566   | Wood, Gregory B.        | Reg. No. 28,133 |
| Hassing, Thomas A.  | Reg. No. P-36,159 | Schuman, Mark D.     | Reg. No. 31,197   |                         |                 |
| Hillson, Randall A. | Reg. No. 31,838   | Schumann, Michael D. | Reg. No. 30,422   |                         |                 |

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Merchant, Gould, Smith, Edell, Welter & Schmidt to the contrary.

Please direct all correspondence in this case to Merchant, Gould, Smith, Edell, Welter & Schmidt at the address indicated below:

3100 Norwest Center, Minneapolis, MN 55402-4131  
Telephone No. (612) 332-5300

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

|                           |                            |  |                                       |  |
|---------------------------|----------------------------|--|---------------------------------------|--|
| 2                         | Full Name<br>Of Inventor   | Family Name<br>Beatty                            | First Given Name<br>Graydon           | Second Given Name<br>Ernest              |
| 0                         | Residence<br>& Citizenship | City<br>St. Paul                                 | State or Foreign Country<br>Minnesota | Country of Citizenship<br>U.S.A.         |
| 1                         | Post Office<br>Address     | Post Office Address<br>1935 Summit Avenue        | City<br>St. Paul                      | State & Zip Code/Country<br>MN/55105/USA |
| 2                         | Full Name<br>Of Inventor   | Family Name<br>Kagan                             | First Given Name<br>Jonathan          | Second Given Name                        |
| 0                         | Residence<br>& Citizenship | City<br>Minneapolis                              | State or Foreign Country<br>Minnesota | Country of Citizenship<br>U.S.A.         |
| 2                         | Post Office<br>Address     | Post Office Address<br>5112 Russell Avenue South | City<br>Minneapolis                   | State & Zip Code/Country<br>MN/55410/USA |
| 2                         | Full Name<br>Of Inventor   | Family Name<br>Budd                              | First Given Name<br>Jeffrey           | Second Given Name<br>R                   |
| 0                         | Residence<br>& Citizenship | City<br>St. Paul                                 | State or Foreign Country<br>Minnesota | Country of Citizenship<br>U.S.A.         |
| 3                         | Post Office<br>Address     | Post Office Address<br>2261 Gordon Avenue        | City<br>St. Paul                      | State & Zip Code/Country<br>MN/55108/USA |
| Signature of Inventor 201 |                            | Signature of Inventor 202                        |                                       | Signature of Inventor 203                |
| Date<br>12/11/92          |                            | Date<br>12/11/92                                 |                                       | Date<br>12/11/92                         |

For Additional Inventors:

Indicate here and attach sheet with same information, including date and signature.

### 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
  - (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.
- (b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and
- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
  - (2) It refutes, or is inconsistent with, a position the applicant takes in:
    - (i) Opposing an argument of unpatentability relied on by the Office, or
    - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

- (c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
- (1) Each inventor named in the application;
  - (2) Each attorney or agent who prepares or prosecutes the application; and
  - (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.
- (d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.



MERCHANT, GOULD, SMITH, EDELL, WELTER & SCHMIDT  
United States Patent Application  
COMBINED DECLARATION AND POWER OF ATTORNEY

#3 A/11

As ~~below~~ named inventor I hereby declare that my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: HEART MAPPING CATHETER

The specification of which

- a.    is attached hereto  
b. X was filed on September 23, 1992 as application serial no. 07/949,690 and was amended on    (if applicable) (in the case of a PCT-filed application) described and claimed in international no.    filed    and as amended on    (if any), which I have reviewed and for which I solicit a United States patent.

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b.    such applications have been filed as follows:

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DEC 14 1993

APPLICATION DIVISION

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Batzli, Brian B. Reg. No. 32,960  
Beck, Robert C. Reg. No. 28,178  
Bogucki, Raymond A. Reg. No. 17,178  
Brennan, Thomas F. Reg. No. 35,178  
Brues, Steven C. Reg. No. 34,120  
Byrne, Linda M. Reg. No. 32,404  
Carlson, Alan G. Reg. No. 25,959  
Caspers, Philip P. Reg. No. 33,227  
Clifford, John A. Reg. No. 30,247  
Conrad, Timothy R. Reg. No. 30,164  
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Gates, George H. Reg. No. 33,500  
Golla, Charles E. Reg. No. 26,396  
Gould, John D. Reg. No. 18,223  
Gressens, John J. Reg. No. 33,112  
Hamre, Curtis B. Reg. No. 29,165  
Harris, Karl S. Reg. No. 35,182  
Hassing, Thomas A. Reg. No. P-36,159  
Hillson, Randall A. Reg. No. 31,838

Johnson, David G. Reg. No. 31,628  
Kluth, Daniel J. Reg. No. 32,746  
Kowalsky, Alan W. Reg. No. 31,533  
Lasky, Michael B. Reg. No. 29,533  
Lundberg, Steven W. Reg. No. 30,568  
Lynch, David W. Reg. No. P-36,204  
Mau, Michael L. Reg. No. 30,087  
Maxin, John L. Reg. No. 34,208  
McDonald, Daniel W. Reg. No. 32,044  
McDonald, Wendy M. Reg. No. 32,627  
Michael, Michelle M. Reg. No. 33,968  
Moy, R. Carl Reg. No. 30,723  
Muehling, Ann M. Reg. No. 33,977  
Mundelius, Antony C. Reg. No. P-35,963  
Nelson, Albin J. Reg. No. 28,850  
Rasch, Kevin W. Reg. No. 35,651  
Reiland, Earl D. Reg. No. 25,767  
Rothfus, Joel A. Reg. No. 33,227  
Schmidt, Cecil C. Reg. No. 20,566  
Schuman, Mark D. Reg. No. 31,197  
Schumann, Michael D. Reg. No. 30,422

Schwappach, Karl G. Reg. No. 35,100  
Schwegman, Michael L. Reg. No. 35,100  
Sebald, Robert A. Reg. No. 31,790  
Smith, Philip H. Reg. No. 30,116  
Smith, Stephanie J. Reg. No. 34,111  
Sorensen, Andrew D. Reg. No. 33,200  
Stenstrom, Dennis G. Reg. No. 28,710  
Stratbridge, Douglas A. Reg. No. 28,275  
Stredhorst, Kristine M. Reg. No. 31,217  
Sumner, John P. Reg. No. 29,114  
Summers, John S. Reg. No. 29,216  
Taylor, Gregory M. Reg. No. 34,203  
Tellekson, David R. Reg. No. 32,314  
Underhill, Albert L. Reg. No. 27,103  
Vandenburgh, J. Derek Reg. No. 22,177  
Welter, Paul A. Reg. No. 20,550  
Williams, Douglas J. Reg. No. 27,354  
Woessner, Warren D. Reg. No. 30,440  
Wood, Gregory B. Reg. No. 28,133

I hereby authorize them to act and rely on instructions from and communicate directly with the person, assignee, attorney/firm/organization/who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Merchant, Gould to the contrary.

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|                           |                            |  |  |  |
|---------------------------|----------------------------|--|--|--|
| 1                         | Full Name<br>Of Inventor   | Family Name<br>Fagan                             | First Given Name<br>Jonathan             | Second Given Name                        |
| 2                         | Residence<br>& Citizenship | City<br>Minneapolis                              | State or Foreign Country<br>Minnesota MN | Country of Citizenship<br>U.S.A.         |
| 1                         | Post Office<br>Address     | Post Office Address<br>5112 Russell Avenue South | City<br>Minneapolis                      | State & Zip Code/Country<br>MN/55410/USA |
| 2                         | Full Name<br>Of Inventor   | Family Name<br>Beatty                            | First Given Name<br>Craydon              | Second Given Name<br>Ernest              |
| 2                         | Residence<br>& Citizenship | City<br>St. Paul                                 | State or Foreign Country<br>Minnesota MN | Country of Citizenship<br>U.S.A.         |
| 2                         | Post Office<br>Address     | Post Office Address<br>1935 Summit Avenue        | City<br>St. Paul                         | State & Zip Code/Country<br>MN/55105/USA |
| 2                         | Full Name<br>Of Inventor   | Family Name<br>Budd                              | First Given Name<br>Jeffrey              | Second Given Name<br>R.                  |
| 2                         | Residence<br>& Citizenship | City<br>St. Paul                                 | State or Foreign Country<br>Minnesota MN | Country of Citizenship<br>U.S.A.         |
| 3                         | Post Office<br>Address     | Post Office Address<br>2261 Gordon Avenue        | City<br>St. Paul                         | State & Zip Code/Country<br>MN/55108/USA |
| Signature of Inventor 201 |                            | Signature of Inventor 202                        |  | Signature of Inventor 203                |
| Date<br>12/11/92          |                            | Date<br>12/11/92                                 |  | Date<br>12/11/92                         |

For Additional Inventors:

Indicate here and attach sheet with same information, including date and signature.

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- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
  - (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.
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- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
  - (2) It refutes, or is inconsistent with, a position the applicant takes in:
    - (i) Opposing an argument of unpatentability relied on by the Office, or
    - (ii) Asserting an argument of patentability.

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- (c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
- (1) Each inventor named in the application;
  - (2) Each attorney or agent who prepares or prosecutes the application; and
  - (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.
- (d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.